

Three New Hemiptera-Heteroptera from the Miocene of Colorado.

By G. W. KIRKALDY.

The following fossils were among some interesting forms sent to me for examination by Prof. Cockerell. I have described them as well as I found possible, but the more accurate determination of Heteroptera will always, apparently, be difficult, as the characters, upon which modern Hemipterology founds genera and species, are rarely visible in fossils. Two of the following belong to the Cimicidae (or Pentatomidae as some authors persist in misnaming it), and the other to the Reduviidae.

TELEOCORIS gen. nov.

The general form is very much like that of certain Tessaratominae (a sub-family very sparsely represented in America), but the head is much larger than anything I know in it; it seems to come into the tribe Halyini of the Pentatominae, but in the absence of a ventral view, it is not certain. The form of the head, in conjunction with that of the pronotum and scutellum, separates the genus from any known to me.

Elongate oval, the head prominent, longer than its width between the eyes, but it is possible that it is exerted from pressure. The central lobe is very slightly longer than the lateral lobes, and converges gradually to the apex where it is acute; the impressed line dividing them extends down as far as the eyes. The lateral lobes are fairly straight, and not much narrowed towards the apex. The antennae are inserted just apical of the eyes (which are somewhat remote from the base of the head), the first segment not quite reaching the apex of the head. The *pronotum* is slightly more than *three times as wide as the base of the head*, and a little more than twice as wide as its length, the basal margin slightly roundedly emarginate, the lateral margins rounded, more prominent anteriorly than posteriorly, and *distinctly laminate*. The scutellum extends to half the length of the abdomen; it is regularly triangular, the hind angles acute, and not at all rounded. The abdomen is

nearly truncate apically, and the specimen seems to be a ♂. The pronotum is strongly and coarsely punctured, the head and abdomen less so.

T. pothetias sp. nov.

Head testaceous, lateral margins and median lobe, as well as the lateral margins basal of the eyes, mostly black. Pronotum testaceous, strongly punctured and clouded with black; scutellum, etc., black, pleurites partly testaceous. Length, 16 mill.; width across shoulders, 7 mill.

Hab.—Miocene shales of Florissant, Colorado, Station 13 B. (*W. P. Cockerell*).

POLIOCORIS gen. nov.

I should have allied this to *Telcoschistus*; had not Scudder stated that the scutellum does not reach halfway to the apex of the abdomen.

Ovoid: Head longer than wide between the eyes, the lobes about equally long, the head rounded apically; the lateral lobes strongly sinuate laterally, the first segment of the antennae reaching just beyond the apex of the head, the second about four times as long as the first. The pronotum is roundly emarginate apically, subtruncate behind, lateral margins rounded and not prominent, the base about three times as wide as the apical margin. The scutellum reaches halfway to the apex of the abdomen, and is apparently somewhat rounded posteriorly; it is closely punctured (as apparently also the pronotum). Tegmina typically Pentatomine, the membrane with many parallel longitudinal veins. Fore tibiae sulcate, the tarsi bi (? tri) segmentate, the apical segment much the longest and thickest.

P. amnesis sp. nov.

More or less dark, how much so is difficult to say. The antennae are apparently banded. Tegmina pale fuscous. Length, 14½ mill.; breadth, 7 mill.

Hab.—Miocene shales of Florissant, Station 14. (*W. P. Cockerell*).

POLIOSPHAGEUS gen. nov.

This seems to agree fairly well with recent species of *Repipta*, but the antennal proportions are different. mentate, the apical segment much the longest and thickest. but the antennal proportions are different.

The first segment of the antennae is scarcely longer than the head (though extending well beyond it), and the second segment is much longer than the first. The form of the pronotum is as in *Repipta*, and there is a posterolateral spine (about as large as in *R. gracilis*). The tegmina extend far beyond the apex of the abdomen and have much of the form of those of *Repipta*, but are not so much constricted. The hind legs are very long (as in *R. miniata*). The fore femora are rather stouter in proportion than in any species of *Repipta*. The genus seems thus to differ from *Repipta*, or any of its allies with spined pronotum, by the shorter first segment of the antennae, and the long second segment. It has somewhat the appearance of *Spiniger*, but the first segment of the antennae is much longer, and the legs are different.

P. psychrus sp. nov.

Largely dark; antennae pale fuscous; membrane pale, infusate basally. Length, 16½ mill.; breadth, 4 mill.

Hab.—Miocene shales of Florissant, Station 13 B. (*W. P. Cockerell*).



VACATION FOR RECREATION AND EDUCATION.—You are familiar with the famous school established years ago by Louis Agassiz on the Island of Penikese. An account of the opening exercises has been perpetuated in the tender, expressive poem, "The Prayer of Agassiz," by John Greenleaf Whittier. The Agassiz Association in honor of that great scientist is, at South Beach, Connecticut, continuing, in name and in spirit, the work begun in his school. The second session will begin June 27th and will include courses for the general public and for children, as well as for technical students. Two daughters and a grandson of Louis Agassiz are among the many members interested in the establishment of this school, and in the other work of The Agassiz Association, and have contributed liberally toward defraying the expenses. President David Starr Jordan, of the Leland Stanford Junior University, California, is one of the trustees of the Agassiz Association and dean of the council. President Jordan was a pupil of Louis Agassiz at the Island of Penikese. The school is established under one very novel condition in that the price of tuition is left for the pupil to decide. The contributions last year ranged from twenty-five cents to one hundred dollars, and the studies that we offered were those easily understood by a kindergartner or by the scientific specialist who came many miles to take special courses. Further particulars may be obtained by addressing The Agassiz Association, Arcadia, Sound Beach, Connecticut.